1.0 Introduction

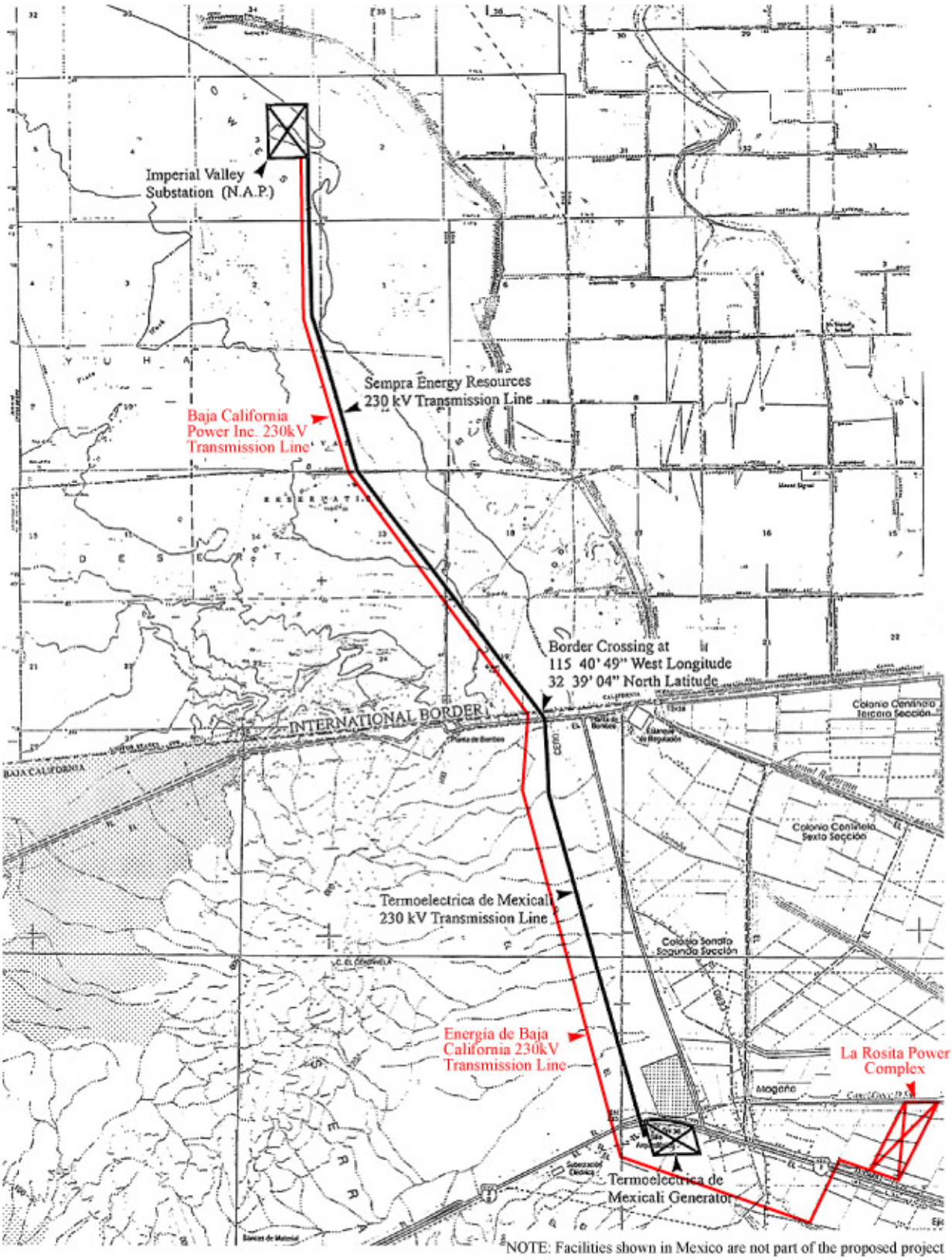
1.1 Background

In separate actions, Sempra Energy Resources (SER) and Baja California Power, Inc. (BCP) have applied to the U.S. Department of Energy (DOE) for Presidential permits pursuant to Executive Order (EO) No. 10485, as amended by EO 12038, and 10 CFR § 205.320 *et seq.* (2000), to construct, operate, maintain, and connect electric power transmission facilities crossing the international border between the United States and Mexico. SER and BCP each propose constructing separate new double-circuit, 230,000 volt (230 kV) transmission lines extending about six miles south from the Imperial Valley Substation (IV Substation), owned and operated by San Diego Gas and Electric Company (SDG&E), to the U.S./Mexico international border. In each case, the objective is to connect the proposed transmission lines to natural gas fueled electric generating plants being constructed in Mexico for the purpose of importing electrical power into the United States onto the southern California electrical grid (Figure 1.1). The proposed transmission lines would traverse about six miles of federal land administered by the U.S. Department of the Interior's Bureau of Land Management (BLM).

The IV Substation is about 10 miles southwest of the city of El Centro in Imperial County, California, and is about 2.5 miles north of State Route 98 (SR-98) and 0.7 mile west of the Westside Main Canal. An existing SDG&E 230 kV transmission line runs south and slightly east from the substation across SR-98 to cross the international border about 6,000 feet west of the junction of the All American Canal and the Westside Main Canal. The BLM right-of-way for the SDG&E transmission line was granted on December 16, 1983; a Presidential permit was issued to SDG&E on December 20, 1983. As indicated, both the BCP and SER transmission lines would be parallel to and within 240 feet of the SDG&E transmission line on the east.

Applications to obtain the DOE Presidential permits and BLM rights-of-way and for the construction, operation, maintenance, and connection of the two double-circuit, 230 kV transmission lines are separate and independent actions by SER and BCP. Transmission facilities, if approved, would be constructed and operated separately by SER and BCP. However, the two transmission lines would affect nearly the same area, are planned for construction at nearly the same time, could be constructed by the same contractor, require similar federal approvals for implementation, and would have similar environmental effects. Therefore, DOE has decided to prepare this environmental assessment (EA) to address both the SER and BCP proposals. In this EA, "the project" refers to both proposed transmission lines unless otherwise indicated.

The proposed SER transmission line would connect with a double circuit, 230 kV transmission line being constructed in Mexico by Termoeléctrica de Mexicali (TDM).



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Map Source: U.S.G.S 7.5 minute topographic map, Mt. Signal quadrangle,
and INEGI carta topograpfica 1:50,000 maps, La Salada and Mexicali

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FIGURE 1.1
Overall System General Area Map

The SER transmission line would be used to import electric power from the TDM electric generating facility into the U.S. The TDM facility will be comprised of two combustion turbines owned by TDM and exclusively dedicated to exporting power over the SER transmission line. The proposed BCP transmission line will connect with a transmission line being constructed in Mexico by Energía de Baja California (EBC). The BCP transmission line will be used to import electric power into the U.S. from turbines at the La Rosita Power Complex (LRPC) electric generating facility. The LRPC would be geographically separate from (approximately 1.5 miles east) the TDM facility and would contain four combustion turbine generators, one owned by EBC and three owned by Energía Azteca X, S. de R.L. de C.V. (EAX).[1] Two EAX turbines will provide power for the Mexican market for CFE. Power would be supplied to BCP only by the EBC turbine and the EAX turbine designated for export.[2]

The components of the electrical power generating and transmission system described in the preceding paragraph are shown in Figure 1.1. Only the SER and BCP transmission lines north of the international border are subject to U.S. federal jurisdiction and, therefore, are the subject of this EA. A diagram showing the relationship of the generating facilities and transmission lines described in the EA is shown in Figure 1.2.

EO 10485, as amended, provides that before a Presidential permit can be issued, the proposed action must be found to be consistent with the public interest. The two criteria used by DOE to determine if a proposed project is consistent with the public interest are:

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[1] In the mid- to late-nineties, the Comisión Federal de Electricidad (CFE), the national electric utility of Mexico, proposed to construct 10 power plants throughout Mexico to meet its growing demand for power. Demand was growing nationally at a seven percent annual rate, and at a higher rate in the state of Baja California. The construction of these power plants was to be through a "build-own-and-operate" structure, where private companies engineer, construct, finance, and operate the power plant, but contract the power sales (electricity output) to CFE through a 25-year power purchase agreement. One of CFE's 10 initial "bid packages" was for a 500 megawatt (MW) facility in the Mexican State of Baja California. The contract for construction of the Baja California facility was awarded in June, 2000, to Energía Azteca X, S. de R.L. de C.V. (EAX). The awarded proposal was for the construction of a 750 MW power plant: 500 MW for exclusive delivery to CFE, the additional 250 MW to be sold to a U.S. power marketer (for delivery in the southwest U.S. or to CFE). The 750 MW EAX facility would have a commercial operation date of April, 2003.

[2] There is the ability to switch the interconnection of the proposed transmission line from the EAX turbine designated for export to another EAX turbine. However, there are no plans to operate the facilities in this manner and, in any event, it would only occur under very limited circumstances (e.g., when the turbine designated for export is not supplying power to the US, and California would be in need of power). The amount of power to be exported from EAX would remain a nominal 250 MW, and would not impact the export of power by the EBC turbine.

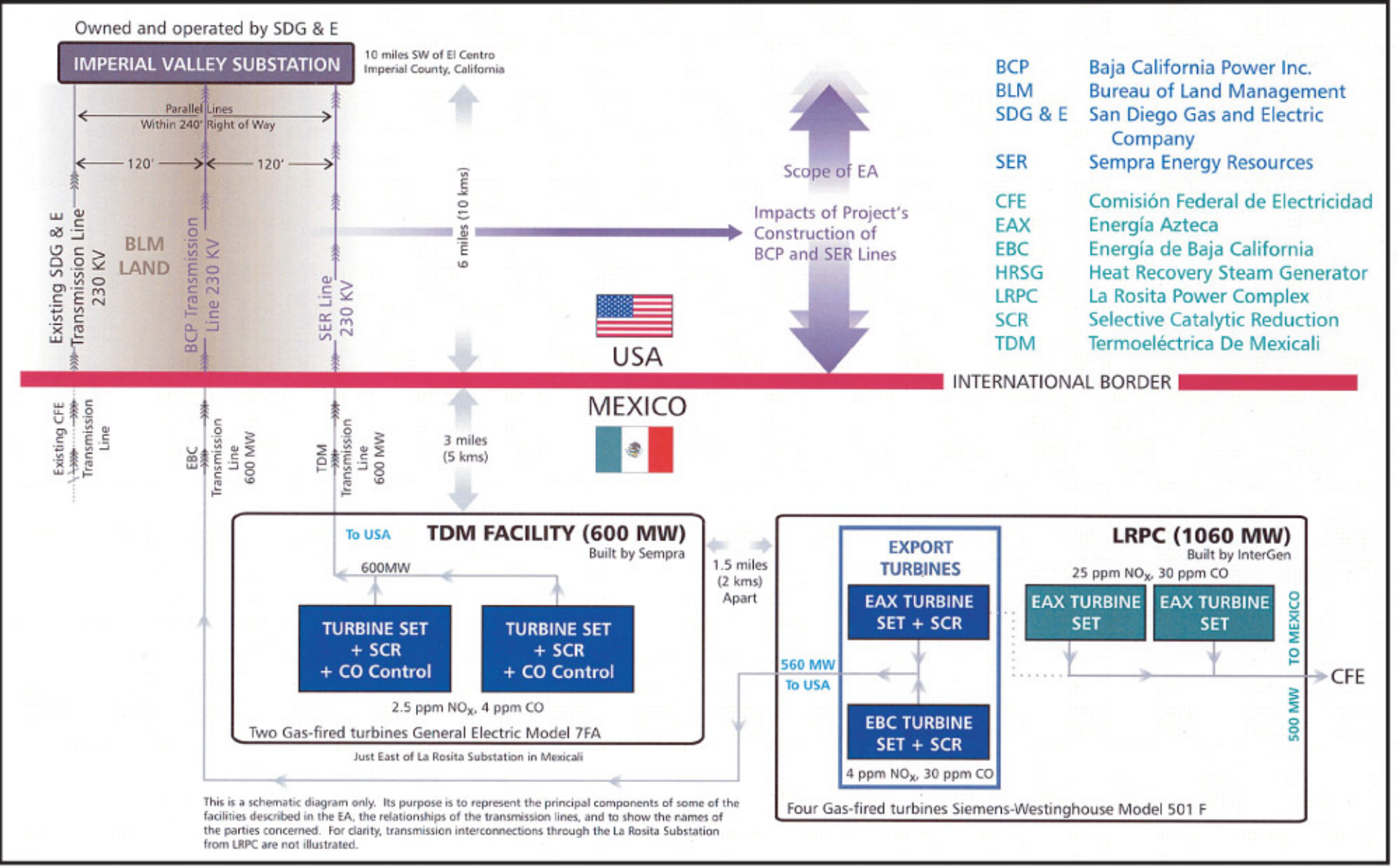

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FIGURE 1.2

Diagram of the Principal Components of the Facilities Described

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1. Assessment of potential environmental impacts in accordance with the National Environmental Policy Act of 1969 (NEPA) and Council on Environmental Quality and DOE implementing regulations at 40 CFR §§ 1500-1508 and 10 CFR § 1021, respectively, and

2. Assessment of impacts on the operating reliability of the U.S. electric supply system; i.e., the ability of the existing generation and transmission system to remain within acceptable voltage, loading, and stability limits during normal and emergency conditions.

Prior to issuing a Presidential permit, DOE must also obtain concurrence from the Secretary of State and the Secretary of Defense.

BCP filed its Presidential permit application with DOE on February 27, 2001. The proposed BCP transmission line would connect power generation facilities being constructed in Mexicali, Baja California, with SDG&E's Imperial Valley Substation. The proposed route in the U.S. is entirely within federal land managed by the BLM. To secure the right-of-way, BCP filed an "Application for Transportation and Utility Systems and Facilities on Federal Lands" with the BLM on February 26, 2001. The proposed right-of-way would run 120 feet to the east of and parallel to the existing SDG&E 230 kV transmission line between the border and the IV Substation in designated Utility Corridor N of the BLM's California Desert Conservation Area Plan (the Desert Plan). The existing SDG&E 230 kV line connects at the U.S./Mexico border with a 230 kV line that is owned and operated by the Comisión Federal de Electricidad (CFE), Mexico's national utility. At the border, the BCP transmission line would connect to a new transmission line being constructed in Mexico.

SER filed its Presidential permit application with DOE on March 6, 2001. The proposed SER transmission line would connect the TDM power plant in Mexicali, Mexico with SDG&E's Imperial Valley Substation. The centerline of the SER right-of-way would be east of and adjacent to the proposed BCP transmission line right-of-way and would be 120 feet wide, so that the centerline of the SER right-of-way would be 120 feet east of the centerline of the proposed BCP right-of-way and 240 feet east of the centerline of the SDG&E right-of-way. The SER right-of-way would also be entirely within federal land managed by the BLM. To secure the right-of-way, SER filed an "Application for Transportation and Utility Systems and Facilities on Federal Lands" with the BLM on February 13, 2001. The proposed SER right-of-way is also within Utility Corridor N of the Desert Plan. At the border, the SER transmission line would connect to a transmission line being constructed in Mexico by TDM.

Although the primary purpose of the proposed transmission lines is to import power into the United States, relatively small amounts of power would also be exported through the proposed transmission lines into Mexico. The export of power is needed for purposes of

initial start-up of Mexican generating facilities (such as water treatment and cooling towers), for the purpose of providing "black start" capability to the Mexican power plants, and for purposes of providing ancillary equipment power when the facilities' electrical generating equipment is not in operation (such as during weekend plant shutdowns). "Black start" refers to start-up of the generating facility when the plant is not generating any electricity to supply its own needs. To permit this export of power, SER filed an application for an electricity export authorization with DOE on March 26, 2001. BCP filed an application for an electricity export authorization with DOE on August 22, 2001.

1.2 Scope of Project

The proposed project consists of the following components:

- The construction, operation, maintenance, and connection of a double-circuit, 230 kV transmission line, approximately six miles (10 kilometers) in length, between the U.S./Mexico international border and the SDG&E Imperial Valley Substation by Sempra Energy Resources.

- The construction, operation, maintenance, and connection of a double-circuit, 230 kV, transmission line, approximately six miles (10 kilometers) in length, between the U.S./Mexico international border and the SDG&E Imperial Valley Substation by Baja California Power, Inc.

- Relocation of six poles of the existing SDG&E 230 kV, single-circuit transmission line near the Imperial Valley Substation.

- Relocation of approximately two poles of the existing Imperial Irrigation District's (IID) 230 kV, single-circuit transmission line near the Imperial Valley Substation.

Both the BCP and SER transmission line projects would also include a static wire strung above the conductors on the lattice towers and monopoles. On both lines, this static wire will also contain fiber optic cables for communications. Together, the project components are intended to allow the importation of electricity generated in Mexico into the United States, and more specifically, into the electrical power grid operated by SDG&E in southern California, and the export of power to the generating facilities for their use, but not to the CFE system.